Contents, Parts A and B (Volumes 55 and 56)

Part A

Preface XIII

PLENARY SESSION
ENVIRONMENT AND PRIMARY ACTIVITIES

Environment and primary activities: economic, social, and legal considerations
C.W. Howe 3

SESSION 1.1
BIOSPHERIC PERSPECTIVE ON BIOTIC CONSERVATION

Global budget of N_2O: the role of soils and their change
A. Banin 27

SESSION 1.2
ENVIRONMENTAL MONITORING IN EMERGING NATIONS

Some factors affecting the extraction of global resource information from remotely sensed data
F.C. Billingsley 41

SESSION 1.3
TECHNOLOGICAL SOLUTIONS TO ENVIRONMENTAL PROBLEMS

Managing dangerous technology
G.G. Schwartz 59

SESSION 1.4
DESERTIFICATION: THE EFFECT OF MAN

Anthropogenic pressures and impacts on marginal, neotropical, semiarid ecosystems: the case of South Texas
J.H. Rappole, C.E. Russell, J.R. Norwine and T.E. Fulbright 91

Desertification from an economic perspective
E.R. Morey 101

Optimal strategies of development processes of frontier environments
E. Hochman and D. Zilberman 111

Toward an economic model of deforestation and social change in Amazonia
D.D. Southgate and C.F. Runge 121

SESSION 1.5
ENVIRONMENT AND DEVELOPMENT

Environment and development
J.J. Warford 129

Environment and development in Chinese special economic zones: the case of Shenzhen
K.C. Lam 147

Environmental research aiming at economic development
M. Pécsi 157

Environmental studies in Bangladesh - a perspective for the less developed countries
S. Safiullah and S. Huq 165

SESSION 1.6
CLIMATE CHANGE

Scientific uncertainty and decision making: the case of greenhouse gases and global climate change
J.A. Laurmann 177

Global habitability and remote sensing: the role of meteorological satellite data
D.H. Greegor Jr. and J. Norwine 187

World climate programme
T.D. Potter 197

SESSION 1.7
POLLUTION ASSESSMENT

Numerical estimation to organic pollution of flowing water by using the epilithic diatom assemblage ----- diatom assemblage index (DAI_{DO}) -----
T. Watanabe, K. Asai and A. Houki 209

Modelling the transport of fine-grained sediments in aquatic systems
W. Lick 219

General remarks on phosphorus sources in areas susceptible to eutrophication, with particular reference to the Northern Adriatic Coast
G. Bressan 229

Suspended matter properties and its role in pollutant transfer from the river to the sea. Case study: Adige River-Adriatic sea
M. Juracic, L. Menegazzo Vitturi, S. Rabitti and G. Rampazzo 243

A review of conditions associated with high sea levels in Southern California
R.E. Flick 251

Ecological models as support systems to decisions in lake management planning
S. Teruggi and V. Vendegna 261

The impact of gasoline lead on man blood lead: first results of the Athens lead experiment
B. Chartsias, A. Colombo, D. Hatzichristidis and W. Leyendecker 275

PLENARY SESSION
ENVIRONMENT AND SECONDARY ACTIVITIES

Achievements in modeling environmental and resource issues in the secondary sector
F.M. Brouwer, W.A. Hafkamp and P. Nijkamp 285

SESSION 2.1
TERRESTRIAL POLLUTION

Acid and heavy metal pollution by wet deposition
P. Valenta, V.D. Nguyen and H.W. Nürnberg 311

Pesticide pollution of soil, water and air in Delhi area, India
M.K.K. Pillai 321

The meteorology of acid deposition in Northern Italy
D. Anfossi, P. Bacci, P. Natale and S. Viarengo 329

Effect of heavy-metals industry on plant communities
J. Sienkiewicz 339

Copper(II) and iron(III) complexation by soil humic acids: an IR and ESR study
N. Senesi, G. Sposito and J.P. Martin 351

SESSION 2.2
URBAN PLANNING

Advances in scientific methodology for preservation of ancient monuments: conservation versus conservatism
J.M. Haynes 365

Architecture of the environment
G.B. Stefinlongo 375

Ecotown - ecoway: Utopia rationalized
M. D'Olivo and P.M. de Campo 383

Tourism as an agent for landscape conservation: an assessment
P.E. Murphy 387

Author Index 397

Subject Index 398

Part B

SESSION 2.3
REMOTE SENSING: A PLANETARY PERSPECTIVE ON THE EARTH

The earth observing system for the 1990 and 2000 decades
A.J. Tuyahov 3

SESSION 2.4
AUTOMATED INFORMATION SYSTEM; A KEY TO GLOBAL UNDERSTANDING

GEMS and the need for a Global Resource Information Database
M.D. Gwynne 19

Advancements in land science data management pilot land data system
W.J. Campbell, P.H. Smith, R. Price and L. Roelofs 31

NASA information systems for the earth sciences
M. Devirian and J. Urena 45

Climate system monitoring
S. Unninayar 55

SESSION 2.5
ECONOMIC VALUATION OF THE ENVIRONMENT

Benefit cost analysis of environmental program alternatives: economics, political philosophy and the policy process
A. Randall 69

Commodity, the bias of the world
A. Marin 77

Preserving endangered species and other biological resources
G. Brown Jr. 89

Assessing the validity of contingent valuation: three field experiments
T.A. Heberlein and R.C. Bishop 99

SESSION 2.6
ECONOMIC PERSPECTIVE ON ENVIRONMENTAL POLICIES

Efficient regulation of environmental health risks: the case of groundwater contamination in California
E. Lichtenberg and D. Zilberman 111

Fishery development in progress: impacts of the macroeconomy
L.L. Hudgins 121

An analysis of factors which influence land use (the relationships with the pattern of economic development)
M. Merlo 139

PLENARY SESSION
THE BIOSPHERE AS HABITAT

Environmental economics
A.V. Kneese 155

SESSION 3.1
POLLUTION MONITORING AND TREATMENT TECHNOLOGIES

Bioassay and biomonitoring assessments of contaminant mobility from dredged material
J.W. Simmers, R.G. Rhett, S.H. Kay and J.M. Marquenie 173

Anaerobic digestion of organic fraction of municipal solid wastes - digester performance
F. Cecchi, P.G. Traverso and P. Cescon 183

SESSION 3.2
WATER POLLUTION AND EUTROPHICATION

The relation of nutrient regeneration in the sediments of the Northern Adriatic to eutrophication, with special reference to the lagoon of Venice
D. Degobbis, M. Gilmartin and A.A. Orio 201

Primary production of the organic matter as an indicator of the eutrophication in the Northern Adriatic Sea
N. Smodlaka 211

Comparison of anthropogenic hydrocarbon inputs to two subtropical marine estuaries
E.S. van Vleet, R.M. Joyce and M.R. Sherwin 221

SESSION 3.3
THE USE OF REMOTE SENSING IN BIOTIC ANALYSIS

Global primary production from terrestrial vegetation: estimates integrating satellite remote sensing and computer simulation technology
S.W. Running 233

Weather independent forest surveillance by means of radar measurements
A.J. Sieber 243

Biomap - a small step for mankind in planetary biology
D.F. Baer 247

SESSION 3.4
REMOTE SENSING OF TERRESTRIAL HAZARDS

Mapping, monitoring, and modelling of hazardous waste sites
T.W. Foresman 255

Solid and hazardous waste disposal site selection using digital geographic information system techniques
J.R. Jensen and E.J. Christensen 265

Space-borne radar for monsoon and storm induced flood control planning in Bangladesh: a result of the shuttle imaging radar-B program
M.L. Imhoff, C.H. Vermillion, M. Story and F. Polcyn 277

Remote sensing for detection of oil in the marine environment: an evaluation of the United States Coast Guard 'Aireye' surveillance system
J. Scepan, J.E. Estes and R.M. Carlson 287

SESSION 3.5
ECONOMIC ENVIRONMENTAL MANAGEMENT

Entropy and "the end of the world"
E. Gerelli 297

The Dutch economy and the environment, 1980-2000: methodology and results of a scenario study
E.C. Van Ierland 301

Global environmental management
C.A. Davos 309

The reuse of municipal wastewater for household uses
M. Shechter and A. Haiman 317

Indicators for planning protection and improvement of the environment as integral part of socio-economic development
S. Vujanac-Borovnica 325

SUMMARY OF THE PROCEEDINGS

Report on identification and assessment of environmental problems
B. Battaglia 339

Report on technological opportunities
U.L. Businaro 347

International environmental problems and international organisations
G. Scimemi 361

ADDITIONAL PAPER FOR THE PLENARY SESSION:
ENVIRONMENT AND PRIMARY ACTIVITIES

Community living long before man
L. Margulis, L. Lopez Baluja, S.M. Awramik and D. Sagan 379

ADDITIONAL PAPER FOR SESSION 2.2:
URBAN PLANNING

Earthquakes and art preservation: A view from the San Andreas fault
N. H. Shapira 401

Author Index 411

Subject Index 413